

Appl. No.: 10/693,154  
Reply to Office Action of dated April 8, 2005

**REMARKS/ARGUMENTS**

The Office Action of April 8, 2005 rejected all of the pending claims of the above-identified patent application. Specifically, the Examiner rejected Claim 1 as anticipated by van Hekken *et al.*, Claims 4-9 and 14 as anticipated by Swenson *et al.*, and Claim 10 as anticipated by Bonutti. The Examiner also rejected Claims 2-3 and 11-12 as rendered obvious by Swenson *et al.* Additionally, the Examiner rejected Claim 14 as indefinite for not stating with sufficient clarity as to whether the claimed subject matter is the adjustable arm or the combination of the adjustable arm and an office chair.

The Applicant respectfully traverses each of the Examiner's prior art grounds for rejection and respectfully submits that the Examiner has not set forth a *prima facie* showing of either anticipation or obviousness. The Applicant further submits that the amendment to Claim 14 has obviated the basis for the rejection of that claim as indefinite. Therefore, each of the present rejections must be withdrawn.

***Support for the Amendments and New Claims 15-16***

This response amends Claims 4, 8, 10, 13, and 14 and adds new Claims 15-16. The Applicant respectfully submits that the amendments and new Claims 15-16 are well supported by the specification as originally filed.

The amendment to Claims 4 and 8, and new Claim 15, add the limitation that the armrest body is maintained in an orientation substantially parallel to the seat of the chair. This characteristic of the claimed embodiment is clear to one of ordinary skill from a review of, among disclosures of the above-identified application, FIGs. 3-4 and 13-16.

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FIGs. 3-4 show an embodiment of the armrest of the present invention in a substantially parallel orientation relative to the seat of the chair of these FIGs. Moreover, the mechanism supporting the armrest body in these FIGs appears to be a parallelogram linkage.

FIGs. 13 - 16 shows the armrest mechanism of this embodiment in greater detail. The armrest body shown in these figures is supported by a mechanism that approximates a parallelogram linkage. It is well known among those of ordinary skill that a parallelogram linkage maintains a constant orientation, relative to structures separate from the linkage, throughout its travel. As one of ordinary skill would understand that the armrest body of FIGs. 13-16 would maintain a constant orientation relative to the seat.

Consequently, the above-identified application describes, to one of ordinary skill, an armrest body that maintains an orientation substantially parallel to the seat of the chair. Thus, this limitation is well supported by the application as originally filed.

The amendment to Claim 10 adds the limitation that of the armrest bracket being designed to be mounted at least about 6 inches above a rear portion of the seat of the chair to which the bracket is attached. This limitation is described in paragraph 144 of the application as originally filed. Therefore the specification, as originally filed, provides adequate support for this amendment to Claim 10.

The amendment to Claim 13 adds the limitation that "raising, repositioning, and releasing movement of said armrest is within an arc of less than 45°". The following pairs of figures, FIGs. 11 and 12; FIGs. 13 and 14; FIGs. 15 and 16; each show an embodiment of the armrest in a lowered (i.e., released) position and a raised position, respectively. In each instance, the movement of the armrest is within an arc of less than 45°. Consequently, this limitation is well supported.

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The amendment to Claim 14 adds the limitation that the pedestal has a plurality of arms near the end of said pedestal furthest from the (chair) base. This structure is described in at least FIGs. 1-4. Therefore, the Applicant respectfully submits that this limitation is well supported.

New Claim 16 describes the subject matter of original Claim 2 and thus is supported by the application as originally filed.

In sum, the Applicant respectfully submits that each of the amendments as well as new claim 15 is well supported by the application as originally filed.

**The Rejections alleging Anticipation**

As noted above, in the April 8, 2005 Office Action, the Examiner rejected Claim 1 as anticipated by van Hekken *et al.*, Claims 4-9 and 14 as anticipated by Swenson *et al.*, and Claim 10 as anticipated by Bonurti. For the followings reasons, the Applicant respectfully traverses the Examiner's rejections.

**The van Hekken et al. Reference**

The Applicant respectfully submits that the van Hekken *et al.* reference is not prior art to the above-identified patent application because this reference is subsequent, and not prior, to the Applicant's claimed invention. Moreover, the van Hekken *et al.* reference does not disclose the claimed subject matter. For either reason, the Applicant respectfully submits that the Examiner's rejection of Claim 1 as anticipated by the van Hekken *et al.* reference is improper and must be withdrawn.

**Not Prior**

The van Hekken *et al.* reference is not prior art to the above-identified patent application because this reference is not prior to the invention claimed in the above-identified application. The van Hekken *et al.* reference matured from an application filed on September 24, 1999. The

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above-identified patent application claims priority from applications filed in April and June, 1999. Thus, the above-identified application is prior to, not subsequent to, the van Hekken *et al.* reference.

Nonetheless, the van Hekken *et al.* reference claims priority from U.S.S.N. 08/868,678 filed June 4, 1997. Thus, the earliest possible effective filing date of the van Hekken *et al.* reference is prior to the Applicant's priority date.

As shown in the attached Declaration of the Applicant, the Applicant conceived and reduced his invention to practice at least as early as January, 1996. Thus, the Applicant's invention antedates the van Hekken *et al.* reference. Consequently, the above-identified application is prior to van Hekken *et al.* Therefore, the van Hekken *et al.* reference is not prior art to the above-identified patent application. Consequently, for this reason alone, the rejection based on the van Hekken *et al.* reference must be withdrawn.

#### *The Swenson et al. Reference*

The Applicant respectfully submits that the Swenson *et al.* reference does not teach the subject matter of Claims 4-9 and 14. Indeed, it appears that the Examiner has misconstrued the Swenson *et al.* reference. The Applicant respectfully submits that when the Swenson *et al.* reference is properly construed, it discloses a device that is substantially different from, and therefore does not anticipate, the claimed subject matter.

Nonetheless, to expedite prosecution of the above-identified application, the Applicant has amended Claims 4 and 14 to more clearly point out and more distinctly claim what the Applicant regards as his invention. In view of these amendments, the Applicant respectfully submits that the Applicant has obviated any bases for alleging the claims are anticipated and therefore submits that this rejection must be withdrawn.

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***The Misconstruction of the Swenson et al. Reference***

Specifically, the Examiner states that "Swenson shows the use of a support (16) for a back of a chair connected to a base of the chair . . ." Office Communication at 3. The Applicant respectfully submits that this is a mischaracterization of the Swenson *et al.* reference. Swenson *et al.* expressly characterize the structure identified by call out number 16 as "a backrest assembly". Col 2, Ins. 58-59. This "backrest assembly" includes "resilient compressible material, such as foam or sponge rubber or the like [and] flexible exterior upholstery covers". Col. 3, Ins. 9 - 18. The Applicant respectfully submits that neither foam, sponge rubber, nor a flexible exterior cover could support either the back of a chair, or a link to an armrest body.

In contrast to backrest assembly 16, the structural component of backrest assembly 16 as described in Swenson that might be used as "support for a back of a chair" of Claim 4 are "rigid stamped sheet metal frames or pans 34 and 35". Col. 3, Ins. 10-11 and Figs. 1 and 2. However, there is no bracket mounted on the sheet metal frames or pans 34 or 35 to which links mounting an armrest body are attached. Thus, if the Swenson *et al.* reference is properly construed, the reference does not disclose the subject matter of Claim 4. Therefore, the rejection of Claim 4 as anticipated by Swenson *et al.* must be withdrawn.

Indeed, Swenson does not disclose any link mounting an armrest body attached to backrest assembly 16. Thus, the Swenson *et al.* reference does not support the Examiner's contentions.

Moreover, the Examiner appears to have abandoned his assertion that backrest assembly 16 is the support when the rejection is applied to Claim 8. Claim 8 calls for a parallel arm mechanism mounted at a first end to the back support. While the Swenson *et al.* reference might describe a parallel arm mechanism for his adjustable arm, the parallel arm mechanism of

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Swenson *et al.* is attached to "connector plate[] 18". Col. 3, ln. 45 and Fig. 1. Thus, if Swenson *et al.* described the subject matter of Claim 8 -- which the Applicant contends it does not-- , then its backrest assembly 16 is not the support the Examiner contends back rest assembly 16 is. In any event, it is clear that the Swenson *et al.* reference does not describe the subject matter of Claim 4.

Because the Examiner has incorrectly construed the cited reference, the Examiner has not made a *prima facie* showing of anticipation. Moreover, because the cited reference discloses something completely different that is claimed, the Examiner has not made a *prima facie* showing of anticipation. For either of these reasons, the present rejection must be withdrawn.

***Properly Construed, the Swenson et al. Reference discloses a different device***

The Applicant respectfully submits that when Swenson *et al.* is properly construed, it does not disclose the subject matter of either Claim 4 or 8. Thus, the present rejection must be withdrawn.

For instance, the subject matter claimed by Claims 4 and 8 calls for a device to support an armrest body that is mounted from the back support of the chair. In marked contrast, Swenson *et al.* describe a device to support an armrest body that is mounted from a connector plate 18, a portion of the chair below the seat. See Fig. 1.

In presumably discussing Claim 7, the Examiner also asserts that Swenson discloses "[a] locking mechanism (73) [which] comprises a slider-crank . . . ." Office Communication at 3. However, the Examiner does not allege that Swenson *et al.* disclose a slider. Because the Examiner has not shown that the Swenson *et al.* reference discloses a slider in its locking mechanism, the Examiner has not made a *prima facie* showing of anticipation. Consequently, the present rejection must be withdrawn.

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In view of the absence of a slider, the Applicant respectfully submits the Examiner's characterization of Swenson is wrong. Instead of a slider-crank, Swenson expressly describes 73 as an "arm rest adjustment knob[]". Col. 3, lns. 62-63.

A slider-crank joint has a slider. See *e.g.*, Reuleaux, Franz, and Alex B.W. Kennedy (ed.), and Alex B.W. Kennedy (trans.), *Kinematics of Machinery : Outlines of a Theory of Machines*, §69, Figure 214, Macmillan and Co., 1876 (A slider-crank joint includes a slider that moves along a defined path. See <http://kmoddl.library.cornell.edu/model.php?m=28>, viewed December 29, 2004). The Examiner has not shown where the disclosure of the Swenson *et al.* reference describes a slider in connection with an arm rest adjustment knob. Thus, for this further reason, the Examiner has not shown that the Swenson *et al.* reference discloses the subject matter of Claim 7.

**The substantially parallel limitation**

The Applicant also notes that Claim 4 calls for the adjustable armrest to maintain the armrest body in an orientation substantially parallel to the chair seat. In marked contrast, the chair of Swenson *et al.* moves its armrest into a position substantially perpendicular to the seat. See Swenson *et al.* FIGs. 1 and 2. For this further reason, the claimed subject matter of Claims 4-9 is not anticipated by Swenson *et al.* and the present rejection must be withdrawn.

Similarly, Claim 14 calls for a pedestal having a plurality of arms. The Applicant understands the Swenson *et al.* reference to disclose a chair in which pedestal does not have arms. Thus, for this further reason, the claimed subject matter of Claim 14 is not anticipated by Swenson *et al.* and the present rejection must be withdrawn.

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In sum, when the Swenson *et al.* reference is properly construed, the Applicant respectfully submits that Swenson *et al.* reference does not disclose the subject matter of Claims 4-9 and 14. Therefore the anticipation rejection must be withdrawn.

**The Bonutti Reference**

The Examiner also rejected Claim 10 as anticipated by the Bonutti reference. The Applicant respectfully traverses this rejection and respectfully submits that it must be withdrawn.

Unlike the armrest bracket of the Bonutti reference which is free of the back, the armrest bracket of Claim 10 is designed to be mounted on the back of a chair at a position at least 6 inches above the seat.

Consequently, the Applicant respectfully submits that the claimed subject matter is not anticipated by Bonutti and that the present rejection must be withdrawn.

**The Rejections alleging Obviousness**

The Examiner rejected Claims 2-3 and 11-12 as obvious in view of Swenson *et al.* Specifically, the Examiner appears to allege that the claimed method would be inherent in the operation of the device disclosed by Swenson *et al.* The Applicant respectfully traverses the Examiner's position, and submits that the substantial differences between the claimed method and the operation of the device disclosed by Swenson *et al.* establishes that Swenson *et al.* could not render the claimed subject matter obvious.

**Claim 2**

When the Swenson *et al.* reference is compared to the subject matter of Claim 2, it is clear that Swenson *et al.* teach away from, and does not render obvious, the claimed subject matter. For instance, Claim 2 requires the user to "rais[e] the distal end of the armrest to an altitude greater than the altitude of the medial end of said armrest".



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To parse this limitation, we need to understand what is "the distal end", and what is "the medial end", of the armrest.

The common and ordinary meaning of the word "distal" is: "2. Situated farthest from the middle . . ." The American Heritage® Dictionary of the English Language, Houghton Mifflin Company (4th Ed. 2000) (viewed online at <http://dictionary.reference.com/search?q=distal> on December 30, 2004). Thus, "the distal end of the armrest" is the end of the armrest furthest from the middle of the chair. This end of the armrest is the end that is closest to the user's fingers in normal use of the armrest.

The common and ordinary meaning of the word medial is: "[r]elating to, situated in, or extending toward the middle; median". *Id.* (viewed online at <http://dictionary.reference.com/search?q=medial> on December 30, 2004). Thus, "the medial end of the armrest" is the end of the armrest closest to the middle of the chair. This end of the armrest is the end that is adjacent to the back of the chair.

In the subject matter of Claim 2, the distal end, *i.e.*, the end closest to the user's fingers, is raised relative to the medial end, *i.e.*, the end adjacent to the back of the chair. In marked contrast to the subject matter of Claim 2, the distal end of the armrest disclosed in Swenson cannot be raised relative to the medial end. Swenson *et al.*'s structure prevents a user from being able to raise the end of the armrest near the user's fingers relative to the end of the armrest nearest to the back of the chair. Instead, the device disclosed by Swenson *et al.* lowers the end of the armrest near the user's fingers relative to the end of the armrest nearest to the back of the chair. See Fig. 2. Thus, Swenson *et al.* teaches away from the claimed subject matter by teaching lowering, instead of raising, the distal end of the armrest.

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Nonetheless, the Applicant recognizes that there is another meaning of the word distal that could be applied to identify the distal end of the armrest. According to the other meaning, the distal end is the end furthest point from the point of attachment. Arguably, in the device disclosed in the Swenson *et al.* reference, the end of the armrest that is the furthest from the point of attachment is not the end nearest to the user's fingers. Rather, according to this argument, because the links that support the armrest connect to the armrest support near the end of the armrest that is the end that is closest to the user's fingers in normal use of the armrest, the distal end of the armrest, according to this argument, is the end closest to the back of the chair.

However, if this meaning of distal is applied, the distal end of the armrest is the same end as the medial end (the end of the armrest closest to the midline). Because the distal end and the medial end are the same end if this meaning of distal is applied to Claim 2, this construction of Claim 2 is not reasonable. Rather, if the distal end and the medial end are the same end, the limitation that the distal end is raised relative to the medial end becomes meaningless, and can never be met, because the two ends are one and the same. Therefore this construction of Claim 2 is unreasonable, and thus, inappropriate.

Instead, a reasonable construction of this limitation of Claim 2 requires that the end of the armrest nearest to the end of the user's fingers is raised relative to the end of the armrest closest to the back of the chair. Because the Swenson *et al.* reference does the opposite, it raises the medial end relative to the distal end, this reference cannot be said to teach or suggest the claimed subject matter. Therefore the present rejection does not make a *prima facie* showing that the Swenson *et al.* reference taught or suggested the subject matter of Claim 2. Consequently, the rejection must be withdrawn.

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### Claim 3

The Examiner also rejected Claim 3 as obvious over Swenson *et al.* One of the limitations of Claim 3 is that the claimed method includes "releasing said armrest in a manner effective to engage a locking mechanism that holds said armrest in the position it was placed." Because the Examiner has not made any showing that the Swenson *et al.* reference teaches or suggests this limitation, the Examiner has not made a *prima facie* showing of obviousness. Consequently, this rejection must be withdrawn.

Moreover, any assertion that a release of the armrest would engage a locking mechanism that holds the armrest in position is contrary to the express teachings of the Swenson *et al.* reference. Specifically, this reference states that "arm rest adjustment knobs 73 and 74, are provided in the arm rest assemblies 22 and 24, respectively". Col. 3, lns. 62 - 64.

The Examiner has provided no explanation as to how releasing an armrest would engage any locking mechanism. Rather, it appears that the armrest of Swenson *et al.* is adjusted by rotating a knob, not by raising a distal portion and repositioning the armrest. In sum, the Examiner has not set forth a *prima facie* showing that the subject matter of Claim 3 is obvious. Thus, the Applicant respectfully submits that this rejection must be withdrawn.

### Claims 11 and 12

The Applicant respectfully submits that the Examiner has not set forth a *prima facie* showing that the subject matter of either Claim 11 or 12 would have been obvious. In the absence of a *prima facie* showing that the subject matter of either Claim 11 or 12 would have been obvious, there is nothing for the Applicant to rebut. Thus, this rejection must be withdrawn.

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Indeed, while the Examiner alleges that "[i]t would have been an obvious matter of design choice to modify the bracket in order that its 6 inches above the rear portion of the seat of the chair," the Examiner has not provided any objective teaching in support of this allegation. The absence of such a teaching renders this rejection defective. *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453 (Fed. Cir. 1998). *See also, In re Beattie*, 974 F.2d 1309, 1311, 24 USPQ2d 1040 (Fed. Cir. 1992). For this reason alone, this rejection must be reversed.

Moreover, if the armrest bracket of the Swenson *et al.* reference were moved to a position 6 inches above the rear portion of the seat of the chair, it would be at, or above, knob 70. In such a position, presumably bar 500 would be approximately parallel to the seat. However, armrest body 30 would be substantially perpendicular to the seat and substantially useless as an armrest. *See Fig. 2 of the Swenson et al. reference.* Therefore, even if there were a motivation to move the armrest bracket of the Swenson *et al.* reference (which there is not), the result would not render the subject matter of Claims 11 and 12 obvious.

It is not believed that extensions of time are required. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

The present paper presents two (2) additional claims, but with the additional claims, the total number of claims remains less than twenty (20). Thus, it is believed that this communication does not occasion any additional total claim fees.

However, the amendment adds one independent claim which occasions an additional independent claim fee.

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In view of the present amendments and remarks, the Applicant respectfully submits that the application is now in condition for allowance and respectfully solicits the same at an early date. Nonetheless, if the Examiner has any questions, he is encouraged to call the undersigned at (212) 210-9518.

Respectfully submitted,

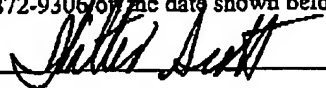


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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the US Patent and Trademark Office at Fax No. (703) 872-9306 on the date shown below.



6/21/2005  
Date

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Niels Diffrient	Group Unit: 3636
Serial No.:	10/693,154	Examiner: A. D. Barfield
Filed:	10/23/2003	Conf. No. 1662
For:	ERGONOMIC ARMREST	

Attorney Docket: 048782/276586

**DECLARATION OF NIELS DIFFRIENT OF PRIOR INVENTION IN THE  
UNITED STATES TO OVERCOME CITED PATENT UNDER 37 C.F.R. § 1.131**

1. This declaration is to establish completion of the invention of Claim 1 of the above-identified application (by the above-named inventor) in the United States at a date prior to June 4, 1997. Thus, the Applicant submits this declaration to remove U.S. Patent No. 6,076,892 to van Hekken *et al.* as a reference.
2. This declaration is being made by the above-named inventor.
3. To establish that the date of the completion of the invention of Claim 1 was prior to June 4, 1997, attached here to as Exhibit 1 is a photograph of a prototype of the invention of Claim 1 that I built prior to June 4, 1997.
4. To further establish that the date of the completion of the invention of Claim 1 was prior to June 4, 1997, attached here to as Exhibit 2 is a copy of a part drawing of a part used in the construction of the prototype shown in Exhibit 1.
5. Exhibit 2A is a copy of the part drawing of Exhibit 2 that I annotated to show the structure recited in Claim 1 of the above-identified application.
6. As can be seen in Exhibit 2A, the prototype armrest pivotable in a horizontal plane had:

- (A) a bracket 100 adapted to be attached to an armrest support arm 200;
- (B) a vertical pivot axis 300 attached to said bracket 100;
- (C) said armrest support arm 200 rotatably attached to said vertical pivot

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axis 300; and  
(D) a mechanism 400 for securing said armrest in a fixed position in the horizontal plane of movement.

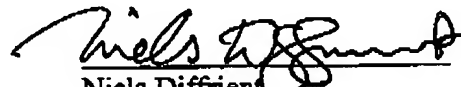
7. From the photograph of Exhibit 1 and the drawings of Exhibits 2 and 2A, it can be seen that the invention of Claim 1 of the above-identified application was made at least by the date the prototype shown in the photograph of Exhibit 1 was made, which is a date earlier than the effective date of the van Hekken *et al.* patent reference.

8. Attached hereto as Exhibit 2B is a fair and accurate copy, albeit enlarged, of the portion of part drawing submitted as Exhibit 2 which records the date of the drawing.

9. Exhibit 2B bears a date of January 19, 1996, a date prior to June 4, 1997.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: May 23 2005

  
Niels Diffrient  
879 N Salem Rd,  
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**Exhibit 1**



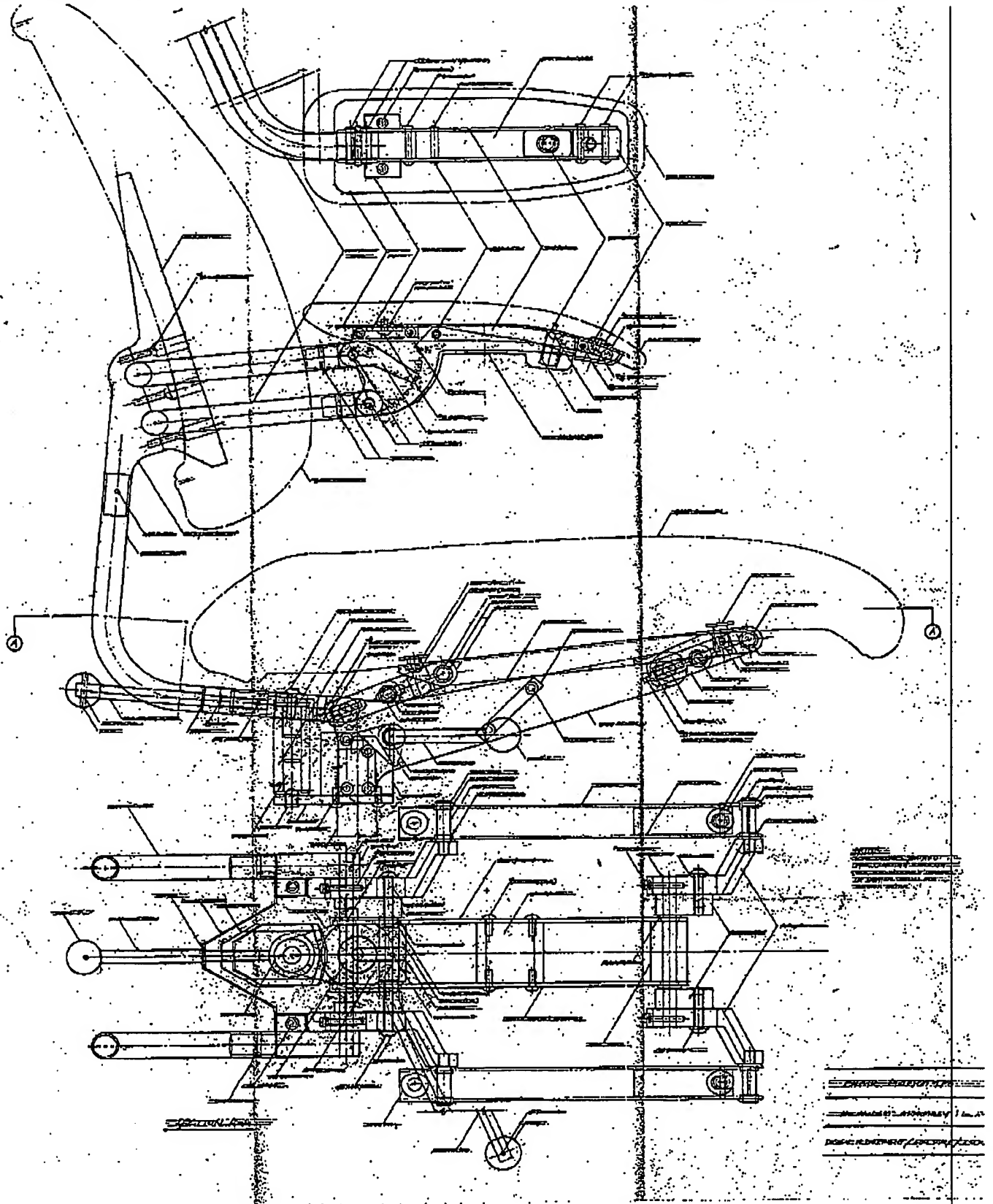


Exhibit 2

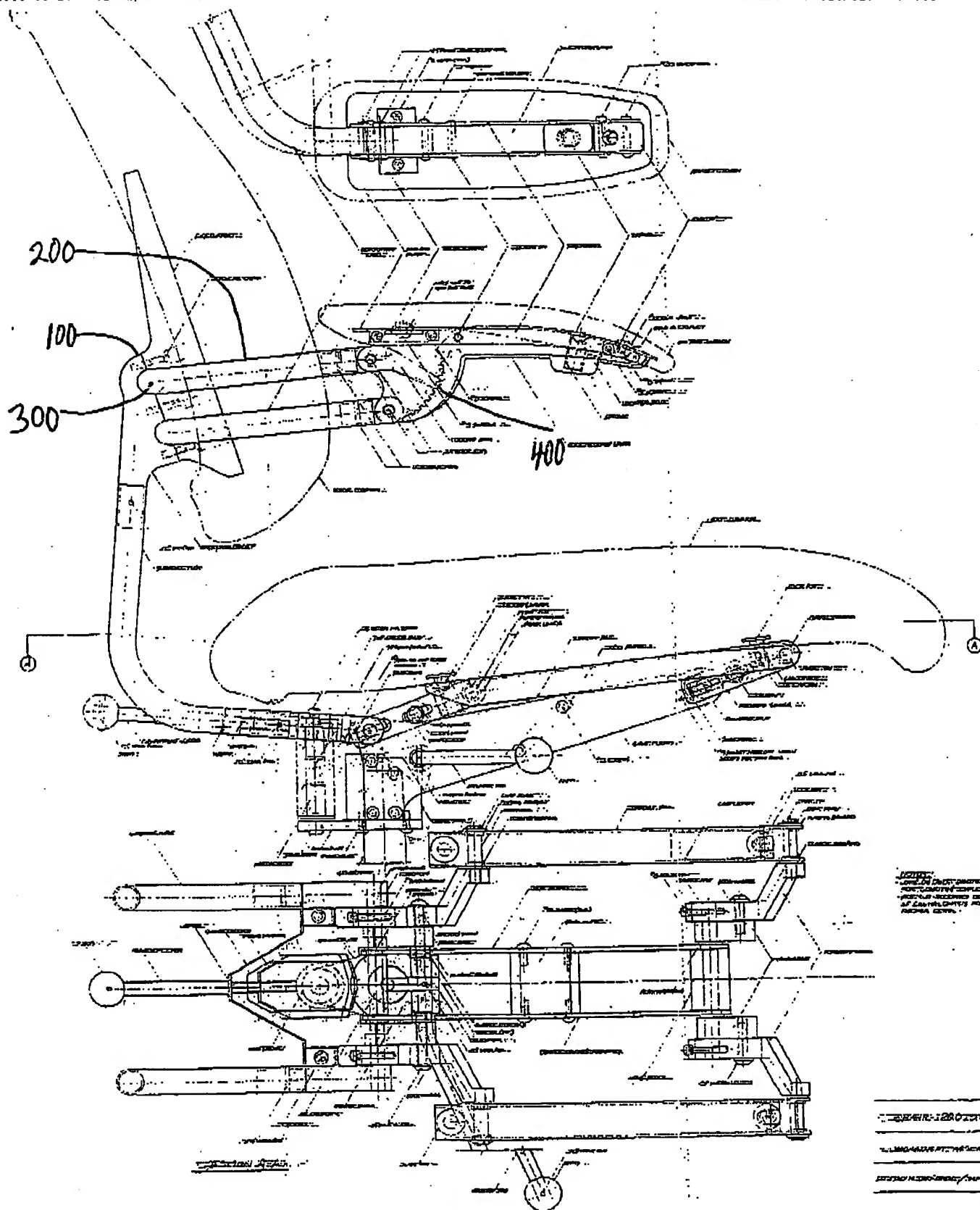
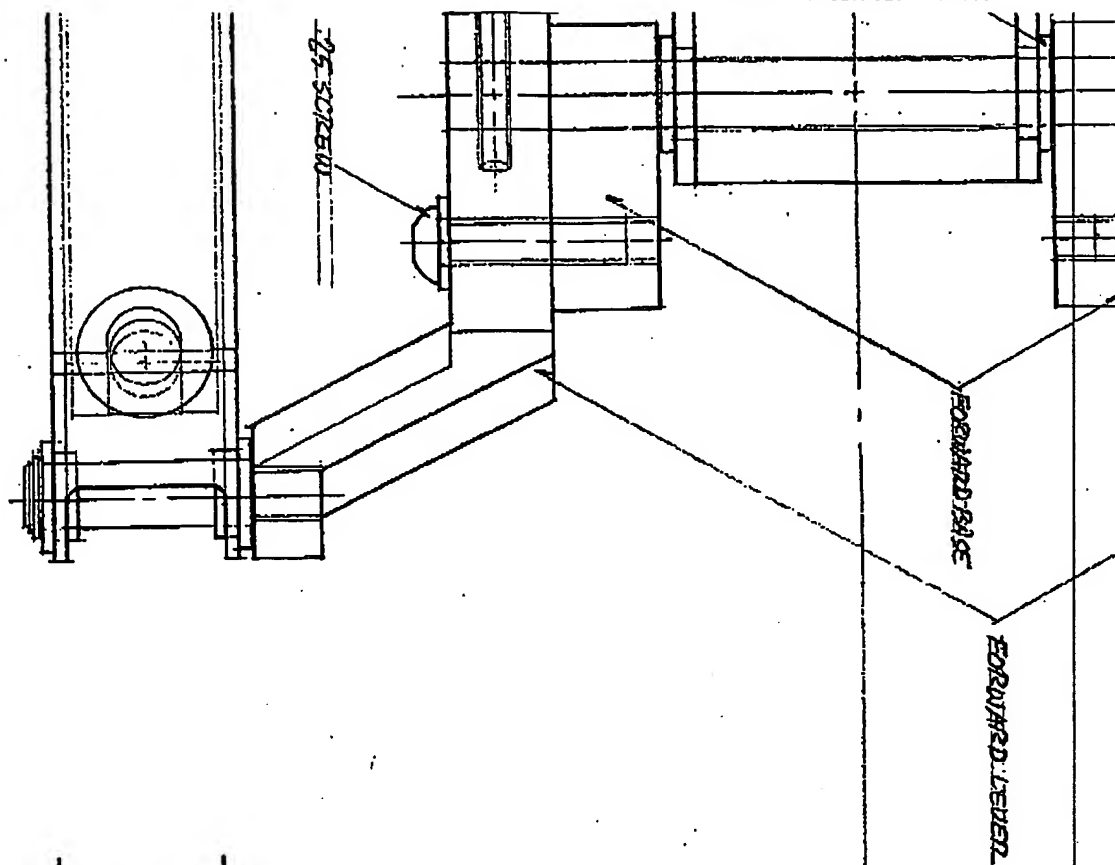


Exhibit 2A



CHAIR PROTOTYPE

MECHANISM ASSEMBLY

DESIGN DIFFERENT / FULL SCALE / 1-19-96